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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,321	12/03/2001	Thomas Honger Callisen	10096.200-US	9485

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NEW YORK, NY 10110

EXAMINER

BENNETT, RACHEL M

ART UNIT	PAPER NUMBER
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1615

DATE MAILED: 06/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,321

Applicant(s)

CALLISEN, THOMAS HONGER

Examiner

Rachel M. Bennett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II in Paper No. 5 is acknowledged. The traversal is on the ground(s) that there would not be a serious burden on the examiner if an election of species were not required. In view of the state of the art, the restriction requirement has been withdrawn. Therefore, claims 1-9 will be examined.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

Claim Objections

3. Claim 7 is objected to because of the following informalities: the claim does not end with a period. Each claim should begin with a capital letter and end with a period. Periods may not be used elsewhere in the claims except for abbreviations. See MPEP 608.01 (m).
Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-9 rejected under 35 U.S.C. 102(b) as being anticipated by Tsauro et al. (US 5385959).

Applicants claim a composition comprising an enzyme encapsulated in a vesicle, wherein the vesicle comprises at least 50% of synthetic polymer as a vesicle forming agent.

Tsauro et al. provides a composite polymer that can stabilize and isolate sensitive ingredients in heavy duty liquid compositions while simultaneously being able to deliver the ingredients in a controlled and reproducible manner when the composition is diluted with water during use. See col. 3 lines 39-44. Tsauro et al. disclose a capsule for use in heavy duty liquid compositions which capsule comprises (1) a component subject to degradative attack; and (2) a composite polymer which in turn comprises a hydrophilic portion and hydrophobic polymer core particle. See abstract. The compositions contain one or more surface active agents from the group consisting of anionic, nonionic, cationic, ampholytic and zwitterionic surfactants or mixtures thereof. See col. 4 lines 33-40. Composite polymers of the capsule are disclosed in col. 10 and col. 11. The polymer capsule is particularly useful for encapsulation of detergent sensitive active ingredients such as one or more enzymes, perfumes, fluorescers and the like. The enzyme or enzymes can be encapsulated with this type of polymer simply by spray drying a mixture of enzymes and this emulsion polymer. A variety of enzymes can be incorporated for use in liquid laundry detergents. These include lipases, cellulases, amylases, oxidases, and the like as well as combinations of these enzymes. See col. 13, lines 10-21. Examples 4 and 5 disclose the preparation of enzyme microcapsules. Claims 1-3 disclose a polymer capsule for use in detergent composition comprising one or more enzymes, a composite polymer and an enzyme stabilizer. Therefore, these claims are anticipated.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsaur et al. (EP 0653485 A1).

Applicants claim a composition comprising an enzyme encapsulated in a vesicle, wherein the vesicle comprises at least 50% of synthetic polymer as a vesicle forming agent.

Tsaur discloses a capsule composition which effectively protects active ingredients, particular hydrophilic ingredients, from bleaches or other harsh components found in the detergent composition. Tsaur discloses the capsule composition comprising (a) an active, e.g. subject to degradation by components in a liquid composition; (b) an oil dispersion containing said active, (c) a polymer shell surrounding the oil dispersion. Preferably, the polymer shell is a water soluble polymer or water dispersible polymers selected from at least one of the group consisting of synthetic polymers such as polyvinyl alcohol, a polyacrylamide, polyvinyl pyrrolidone, or other polymers such as carrageenan, guar gum, xanthan gum, cellulose and protein. Tsaur further discloses detergent compositions comprising such capsules. Accordingly, the detergent composition comprises (a) a surfactant, (b) a capsule comprising an active and an oil dispersion and (c) a polymer shell surrounding the oil dispersion and active. It is clear that a variety of hydrophilic polymers have potential utility as the polymer coating for the capsules. The key is to select an appropriate hydrophilic polymer that would be essentially insoluble in the

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composition (preferably a concentrated liquid system) under the prevailing electrolyte concentration, yet would dissolve or disintegrate when this composition is under conditions of use. The tailoring of such polar polymers is well within the scope of those skilled in the art. See page 5. The active ingredient is preferably an enzyme. See page 6. Example 1 disclose an enzyme in a PVA/PS (i.e. polyvinylalcohol polystyrene) capsule. Example 6-9 disclose the enzyme dispersion encapsulated with a polymer solution containing polyvinyl alcohol. Therefore, these claims are anticipated.

8. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gould et al. (US 3576760).

Applicants claim a composition comprising an enzyme encapsulated in a vesicle, wherein the vesicle comprises at least 50% of synthetic polymer as a vesicle forming agent.

Gould et al. disclose materials entrapped in water soluble hydroxyalkyl acrylate or methacrylate polymers to provide ready sources of the material by the deletion of water. Thus, there can be entrapped drugs, pesticides, flavoring agents and fragrances. See abstract. The water soluble polymers also are advantageous in trapping certain species such as enzymes which will not tolerate alcohol or solvents other than water. See col. 1. Enzymes are disclosed in col. 8, lines 56-62. Example 16 discloses the polymer of Example 1 (polymers include hydroxyethyl methacrylate and methacrylic acid) entrapping enzymes suitable for compounding into commercial detergent preparations based on non-ionic and/or anionic detergent materials. Therefore, these claims are anticipated.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel M. Bennett whose telephone number is (703) 308-8779. The examiner can normally be reached on Monday through Friday, 8:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on (703) 308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3592 for regular communications and (703) 308-7924 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.

R. Bennett
May 23, 2003

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600